JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B.Tech II Year II Semester Examinations, July/August - 2021
OPERATING SYSTEMS
(Common to CSE, IT)

Time: 3 hours   Max. Marks: 75

Answer any Five Questions
All Questions Carry Equal Marks
- - -

1.a) What are the various components of operating system structure and explain with a neat sketch.

   b) Differentiate between Multi Programming, Multi Tasking and Multi processing systems.

[8+7]

2. Consider the following five processes with the length of the CPU burst time in milliseconds.

Process	Burst Time	Priority
P1	10	3
P2	1	1
P3	2	3
P4	1	4
P5	5	2

   Processes are assumed to have arrived at time 0.
   For the above set of processes, find the average waiting time and average turn around time for each of the following scheduling algorithm using Gantt chart. Consider 1 is highest priority:
   a) SJF   b) Non Preemptive Priority   [7+8]

3. What is Deadlock? List the condition that leads to deadlock. How deadlock can be prevented.   [15]

4.a) Distinguish between logical verses physical address space.

   b) Explain about Virtual Memory Management in detail.   [7+8]

5. Describe about the different types of File allocation methods.   [15]

6.a) What are the various objectives and functions of operating systems?

   b) Write short note on Real Time Operating Systems.   [8+7]

7.a) What is Demand paging? Explain.

   b) Discuss about segmentation with an example.   [7+8]

8. What is Mutual exclusion? Explain Peterson's solution for mutual exclusion problem.

[15]

---ooOoo---